

**Translation**

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>R 43453</b>	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. <b>PCT/AT2004/000151</b>	International filing date (day/month/year) <b>04.05.2004</b>	Priority date (day/month/year) <b>03.07.2003</b>
International Patent Classification (IPC) or national classification and IPC <b>B23K11/30</b>		
Applicant <b>FRONIUS INTERNATIONAL GMBH</b>		

1.	This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.	
2.	This REPORT consists of a total of <u>8</u> sheets, including this cover sheet.	
3.	This report is also accompanied by ANNEXES, comprising: a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows: <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).	
4.	This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input checked="" type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application	

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/AT2004/000151

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☐ This report is based on translations from the original language into the following language \_\_\_\_\_ which is the language of a translation furnished for the purposes of:
    - ☐ international search (Rule 12.3 and 23.1(b))
    - ☐ publication of the international application (Rule 12.4)
    - ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
  - ☐ the international application as originally filed/furnished
  - ☒ the description:
    - pages 1-13 \_\_\_\_\_ as originally filed/furnished
    - pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
    - pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
  - ☒ the claims:
    - nos. 1-18 \_\_\_\_\_ as originally filed/furnished
    - nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
    - nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
    - nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
  - ☒ the drawings:
    - sheets 1/7-7/7 \_\_\_\_\_ as originally filed/furnished
    - sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
    - sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
  - ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
  - ☐ the description, pages \_\_\_\_\_
  - ☐ the claims, nos. \_\_\_\_\_
  - ☐ the drawings, sheets/figs \_\_\_\_\_
  - ☐ the sequence listing (*specify*): \_\_\_\_\_
  - ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
  - ☐ the description, pages \_\_\_\_\_
  - ☐ the claims, nos. \_\_\_\_\_
  - ☐ the drawings, sheets/figs \_\_\_\_\_
  - ☐ the sequence listing (*specify*): \_\_\_\_\_
  - ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

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## Box No. IV Lack of unity of invention

1. ☒ In response to the invitation to restrict or pay additional fees the applicant has:
- ☐ restricted the claims.
  - ☒ paid additional fees.
  - ☐ paid additional fees under protest.
  - ☐ neither restricted the claims nor paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is:
- ☐ complied with.
  - ☐ not complied with for the following reasons:

1. The different groups of supposed inventions are claims 1-10 and 11-18.

**Lack of unity of invention - a priori**

The special technical feature of independent claim 1 is indicated as "that the pay-out roller (10) and the wind-in roller (11) of the winding device (7) are arranged on the base body (2) or on the tongs arm (3), and that at least one guide groove (8) is arranged on the tongs arm (3) and/or on the electrode holder for guiding the strip (6) along the tongs arm (3)."

The special technical feature of independent claim 11 is indicated as "that the tongs arm (3) is formed by a main element (24) which is pre-tensed by at least a tie bar or pull rope (25)."

The two groups of supposed inventions do not address the same technical problem and do not share any same or corresponding technical features.

4. Consequently, this report has been established in respect of the following parts of the international application:

- ☒ all parts.
- ☐ the parts relating to claims Nos. \_\_\_\_\_

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	<u>1-10, 12-18</u>	YES
	Claims	<u>11</u>	NO
Inventive step (IS)	Claims		YES
	Claims	<u>1-10, 12-18</u>	NO
Industrial applicability (IA)	Claims	<u>1-18</u>	YES
	Claims		NO
2. Citations and explanations (Rule 70.7)			
2. The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 1 does not involve an inventive step (PCT Article 33(3)).			
a) Document DE-A-44 16 504 is considered the prior art closest to the subject matter of claim 1. It discloses (the references in parentheses relate to said document):			
Spot welding tongs (1) suitable for use by robots for resistance welding of workpieces, in particular metal sheets, with tongs arms (2) that are pivotably mounted on a base body and which can be adjusted via an actuation means and on which electrode holders for the electrodes (4) are arranged, and with a winding device (7) comprising a pay-out roller (9a) and a wind-in roller (9b) for winding in or out the strip (5) for protecting at least one electrode (4), wherein the pay-out roller (9a) and the wind-in roller (9b) of the winding device are arranged on the base body (2) or on the tongs			

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Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

arm (3) - see in particular figure 1; column 3, lines 48-50.

In addition, the winding device of document DE-A-197 54 546 is also covered by the wording "arranged on the base body or on the tongs arm".

b) The subject matter of claim 1 differs therefrom in that at least one guide groove (8) is arranged on the tongs arm (3) and or on the electrode holders (4) for guiding the strip (6) along the tongs arm (3).

c) It should be obvious to a person skilled in the art to provide a guide groove wherever it might be of use, especially since one (7) was already used in DE-A-44 16 504 on the electrode cap (4).

3. The applicant has argued that DE-A-44 16 504 gives no further details as to the arrangement of the winding device and the course of the electrode protection strip. This may well be so, but a look at figure 1 is sufficient to show that "the pay-out roller and the wind-in roller are arranged on the tongs arm", and therefore this feature belongs in the preamble.

4. The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 11 is not novel (PCT

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
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Article 33(2)).

US-A-2 678 367 is considered the prior art closest to the subject matter of claim 11. It discloses (the references in parentheses relate to said document):

Spot welding tongs suitable for use by robots for the resistance welding of workpieces, in particular metal sheets, with tongs arms (4, 5) that are pivotably mounted on a base body and which can be adjusted via an actuation means, and to which electrode holders for the electrodes (3) are secured, wherein the tongs arm (3) is formed by a main element (5) which is pretensed by at least a tie bar (7) or pull rope - see in particular figure 5.

5. The applicant has argued that the prior art tongs arms are integral and/or solid in design. The subject matter of claim 11 can be produced so as to be significantly smaller and lighter.

However, the wording of claim 11 "*the tongs arm (3) is formed by a main element (5) which is pretensed by at least a tie bar (7) or pull rope*" does not exclude the possibility that the tongs arm could be integral or solid in design.

6. Spot welding tongs likewise covered by the wording of claim 11 are disclosed in US-A-4 684 778 - see in particular figure 2, main element (70)

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pretended by tie bar (110).

7. Dependent claims 2-10 and 12-18 do not contain any features which, in combination with the features of any claim to which they refer, meet the PCT novelty and inventive step requirements.

- a) The additional features of claims 2 and 3 are known from DE-A-44 16 504 - see in particular claim 6 and column 3, line 40.
- b) The additional features of claims 4-10 and 12-18 appear to be entirely rudimentary and normal designs for tongs.
- c) The additional features of claim 13 are known from EP-A-0 391 551 - see in particular figure 2.

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Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claims 4, 6-9, 14-18

8. Since it is not permitted to combine previous claims with one another in a reference (PCT Rule 6.4(a)), the expression "**or more**" should be deleted from claims 4, 6-9 and 14-18.